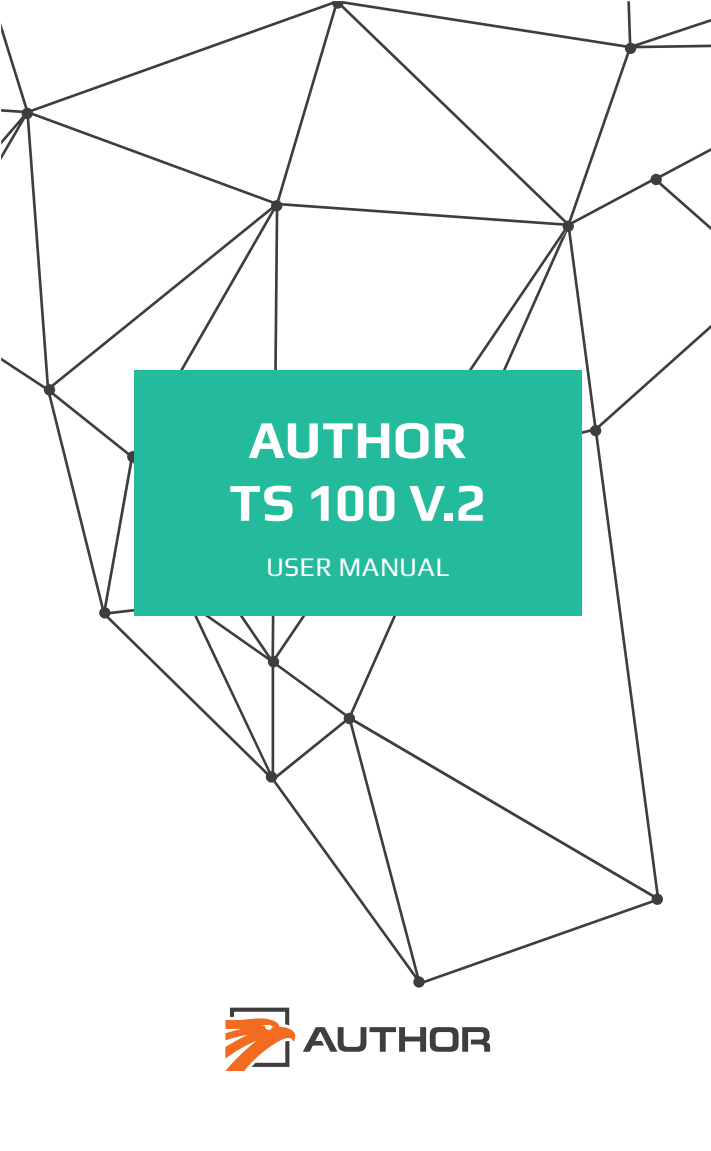




AUTHOR TS 100 V.2

USER MANUAL



Dear Client,

Thank you for choosing AUTHOR!

Please read this manual prior to using the device. The developer and manufacturer cannot be held liable for any damage resulting from the use of the device for other than its intended purpose, non-compliance with safety rules, or neglecting the requirements set out herein.

CONTENTS

BACKGROUND INFORMATION.....	3
DESCRIPTION	5
Appearance.....	5
Button functions	5
GET STARTED	6
OPERATING MODES.....	7
VOLTAGE	7
OSCIL	9
DETECT	10
PULSE	11
SETTING	12
FLASHLIGHT	13
FIRMWARE UPDATE AND CONFIGURATION	
VIA AUTHOR FLASHER.....	14
Firmware update.....	14
Settings	15
MAINTENANCE	18
Replace the tester's probe.....	18
Battery charging	18
Calibration	18
SPECIFICATIONS.....	19
COMPLETE SET	19

BACKGROUND INFORMATION

The AUTHOR TS 100 v.2 digital tester is a diagnostic tool designed for car professionals who repair and install standard electronic equipment with the onboard voltage of 12 V and 24 V.

Key benefits:

- It is designed for diagnostics of the car's standard electronic equipment with the onboard voltage of 12 V and 24 V.
- It detects digital data buses automatically and manually.
- It is equipped with voltmeter and pulse generator features.
- Oscillograph mode with recording. The feature enables you to observe and analyze the signal diagram in real time.
- The built-in rechargeable battery provides a long operating time without recharging.
- The battery is charged and firmware is updated via microUSB.
- The working area is illuminated with a built-in flashlight.
- Display orientation is configurable both for the right- and left-handed via the Left Hand feature.
- Built-in protection against reverse polarity. If the connection is incorrect, an error message pops up.

ATTENTION!

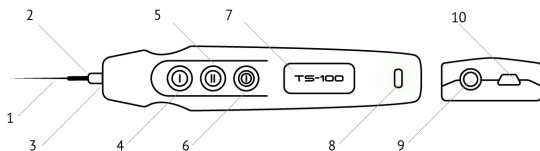
- The manufacturer reserves the right, without prior notice to the user, to introduce changes to the product design to improve its operation and technical characteristics.
- If voltage exceeds 32 V, this may damage the device.
- Do not connect the clip to the positive output or the probe — to the negative output. This may damage the device.

Warranty card

It is recommended to check carefully if the warranty card has been filled out correctly. Make sure it contains the seal of the dealership or installation center, the date of sale, and the salesperson's signature with full name. If the warranty card is filled out incorrectly, this may result in denial of warranty maintenance.

DESCRIPTION

Appearance



1	Probe	6	PWR button
2	Probe fastening	7	Display
3	Flashlight	8	LED
4	Function button 1	9	Port: jack 3.5
5	Function button 2	10	Port: microUSB

Button functions

Function button 1

- Select a mode.
- Apply the load of 1 kOhm in the VOLTAGE mode.
- Zoom in the waveform in the OSCIL mode.
- Manage waveform recording and playback in the OSCIL mode.
- Reset the data in the DETECT mode.
- Enable or disable pulsing in the PULSE mode.
- Configure submodes in the SETTING mode.

Function button 2

- Select a mode.
- Apply the load of 50 Ohm in the VOLTAGE mode.
- Zoom out the waveform in the OSCIL mode.
- Manage waveform recording and playback in the OSCIL mode.
- Reset the data in the DETECT mode.
- Enable or disable pulsing in the PULSE mode.
- Configure submodes in the SETTING mode.

PWR button

- Turn on or off the tester.
- Switch between the modes.
- Exit a mode.
- Turn on or off the flashlight.

GET STARTED

Before starting work, connect the tester to the car's ground "-" via a cable with a terminal.



Connect the terminal to the car's ground "-" only. Connection to other circuits may damage the tester.

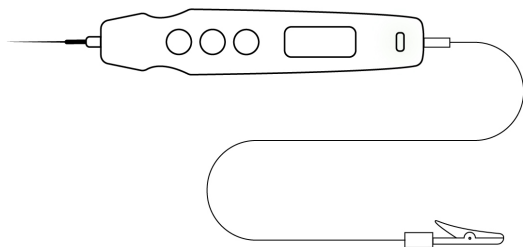
To turn on the tester, push and hold the PWR button for 1.5 seconds.

Then select an operating mode. To switch between the modes, use the PWR button. To switch into a selected mode, push Button 1 or 2. To exit the mode, push PWR.



The tester switches into the Sleep mode in 3 minutes. It exits the mode automatically after you take the tester in your hand. You can adjust the sleep timeout via AUTHOR Flasher.

To turn off the tester, push and hold the PWR button for 2 seconds.



OPERATING MODES

VOLTAGE

The mode helps you measure voltage and search for ground "-". Circuit voltage values are displayed in the 4-digit form and they are duplicated via sound and light indication.

Indication values for voltage measurement

Voltage	Light indication color	Sound indication ¹
Up to 1 V	Green	Yes
From 1 V to 5 V	Orange	Yes
From 5 V	Red	Yes

Once you have detected ground "-", sound indication will follow and "Ground" will occur on the display.

Check the circuit under load

To check the change in circuit voltage, apply the load of 1 kOhm or 50 Ohm via Buttons 1 or 2 respectively. Once the load applied, if the circuit voltage decreases by more than 0.5 V, the power wire is incorrect.

To apply the constant load of 50 Ohm or 1 kOhm, place the probe on the wire and push the relevant button twice during 1 second. To turn it off, push the button once again.



Applying the load for longer than 20 seconds may damage the tester.



The measurement limit of the tester is 31 V.

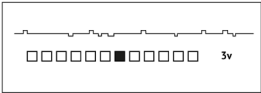
¹ You can configure sound indication in the SETTING mode or via AUTHOR Flasher.

OSCIL

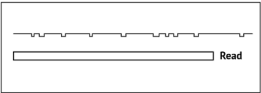
The mode helps you analyze the amplitude and time parameters of the electrical signal applied to the probe. When you select the OSCIL mode, the tester switches into the real-time signal monitoring mode. To zoom in or out the waveform, use Buttons 1 and 2 respectively.

Waveform recording and playback

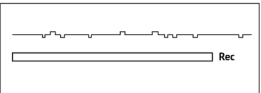
For a detailed analysis of the signal waveform, use the recording mode.



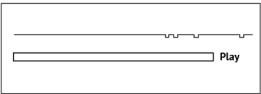
To prepare the tester for recording, place the probe on the wire, push and hold Button 1 or 2 until the display shows "Read".



To start recording, push Button 1 or 2. During recording, the display will show Rec. Recording will continue until internal memory is full.



Once it is full, recording will stop while the tester will switch into the playback mode. Once done, the display will show "Play".



To play the recording, push Button 2. You can speed up the playback by pushing Button 2 repeatedly. You can slow down the playback by pushing Button 1 repeatedly.

To stop the playback, push Button 1. You can reverse the playback by pushing Button 1 repeatedly.

To delete the recording, push and hold Button 1 or 2. Once done, the tester will be ready for recording again. The recording will also be deleted automatically after you exit the mode.

DETECT

The mode helps you detect the type of digital buses used in the car. Once you are in this mode, the display will show "read". To recognize the signal, place the probe on the wire.



If successful, the display will show the name of the digital bus, for example "can-hi".



If unsuccessful, the "---?---" icon will appear on the display. If no signals are found, the display will show No signal.

To reset the data, push Button 1 or 2.

PULSE

The mode helps you search for wires in the car. In this mode, the tester sends negative pulses to the probe with the duration of 150 ms and the interval of 150 ms.

To turn on pulsing, place the probe on the wire and push Button 1 or 2. The display will show ON and the LED will be blinking green.

To turn it off, push Button 1 or 2 again. The display will show the OFF sign.



In this mode, search for wires either with the car's battery disconnected or with ports of the tested wiring harness disconnected. Failure to follow these recommendations may lead to failure of the tester or the car's electronic components.



You can configure the pulsing period via AUTHOR Flasher.

SETTING

The mode helps you configure the tester. To switch between the submodes, use the PWR button. To switch into a selected submode, push Button 1 or 2. To exit the submode, push PWR. To exit the SETTING mode, switch into the back submode and push Button 1 or 2.



You can change the settings below via AUTHOR Flasher.

Volume

The submode helps you configure sound indication in the VOLTAGE mode.

To configure the sound indication volume, use Button 1. If you have set the maximum volume, the signal tone will change depending on the voltage on the tested wire. You can also turn off sound indication of the tester.

To configure the sound indication playback mode, use Button 2. The following parameters are available:

- Only when a positive signal is detected.
- Only when a negative signal or ground "-" is detected.
- When a positive signal, a negative signal or ground "-" is detected. Set by default.

Memory

The submode helps you stay in the selected mode even after you turn off the tester. If the feature is enabled, the display will show the mode that you selected before turning off the tester. The following parameters are available:

- ON — a feature is on.
- OFF — a feature is off. Set by default.

Left Hand

The submode helps you configure display orientations depending on the device's position. The following parameters are available:

- ON — display orientation for the left hand is on (the probe is directed to the right).
- OFF — display orientation for the right hand is on (the probe is directed to the left). Set by default.
- AUTO — automatic change of orientation depending on the tester position is on.

FLASHLIGHT

To illuminate the working area, the device is equipped with a bright flashlight, which is built into the base of the probe.

To turn on the flashlight, push the PWR button twice or tap the flashlight's body with your finger twice.

To turn off the flashlight, push PWR twice.



You can set the auto-off time via AUTHOR Flasher.

FIRMWARE UPDATE AND CONFIGURATION VIA AUTHOR FLASHER

Firmware update

You can update firmware via AUTHOR Flasher (Version 4.4.0 or higher). For the tool and firmware update file, go to author-alarm.com/production/additional-devices/ts-100-v2. To connect the tester to your PC, use microUSB.

To update the firmware, follow these steps:

1. Download the latest firmware.
2. Extract the archive to a local folder with write rights (Documents, for example).
3. Connect the tester to PC via microUSB.
4. In the navigation bar, select the **USB** interface.
5. Select **TS 100** and click **Connect**.
6. Indicate a path to the downloaded firmware: in **Select Firmware**, click  > in the pop-up window, select a local folder containing the firmware file > select the firmware file > click **Select**.
7. Launch the firmware update process by clicking **Install**.
8. Once completed, click **OK**. If successful, a pop-up window will appear.
9. Disconnect the tester from PC.

Settings

To configure the tester, you can also use AUTHOR Flasher. In the navigation bar, select Settings or Extra options.

Next, the summary table shows the settings available in the SETTING mode (for more details, see Page 12) and in AUTHOR Flasher. Default values are grayed out.

Configuration in the SETTING mode	Configuration via AUTHOR Flasher	Functionality of a setting	Available settings
Volume > Function button 1	Sound indication volume	Configure the sound indication volume in the VOLTAGE mode	Off
			Minimal
			Middle
			Maximal
Volume > Function button 2	Sound indication playback mode	Select the sound indication playback mode in the VOLTAGE mode	Only positive signal
			Only negative signal or ground "-"
			Positive signal, negative signal or ground "-"
Memory	Memory feature	The feature helps you stay in the selected mode even after you turn off the tester. ↓	ON / Enabled

Configuration in the SETTING mode	Configuration via AUTHOR Flasher	Functionality of a setting	Available settings
Memory	Memory feature	If the feature is enabled, the display will show the mode that you selected before turning off the tester	OFF / Disabled
Left Hand	Left Hand feature	Configure display orientations depending on the device's position	ON / Display orientation for the left hand (the probe is directed to the right)
			OFF / Display orientation for the right hand (the probe is directed to the left)
			AUTO / Automatic change of display orientation
—	Time to sleep mode	Set the time period during which the tester will not enter the Sleep mode while it is idle	1 minute
			2 minutes
			3 minutes
			Off

Configuration in the SETTING mode	Configuration via AUTHOR Flasher	Functionality of a setting	Available settings
—	Pulse period	Set a pulsing period for the PULSE mode	From 100 to 500 ms. The default value is 150 ms
—	Flashlight operating time after tapping on the body	Set the time elapsing before the flashlight automatically turns off after you turn it on with the PWR button	15 seconds
			30 seconds
			60 seconds
			Shutdown by user command only
—	Flashlight operating time after tapping on the body	Set the time elapsing before the flashlight automatically turns off after you turn it on by tapping on the device's body	15 seconds
			30 seconds
			60 seconds
			Off
			Shutdown by user command only
—	Time to automatic shutdown	Set the time elapsing before the tester automatically turns off by entering the Sleep mode	From 1 to 5 hours. The default value is 3 hours
—	Resetting user settings to default	The feature helps you reset tester settings to default	—

MAINTENANCE

Replace the tester's probe

If needed, you can replace the faulty tester probe by yourself. Just unscrew the faulty probe and install a new one.

Battery charging

The tester is equipped with a built-in battery with the capacity of 350 mAh. The battery symbol in the upper right-hand corner of the display shows the current charge level. The blinking of the symbol shows that the battery charge has dropped to a critical level.

To charge the tester, plug it into a power socket via a microUSB and power adapter¹. When charging starts, the symbol  will appear on the display and the LED will turn red. When the battery is fully charged, the LED will turn green.

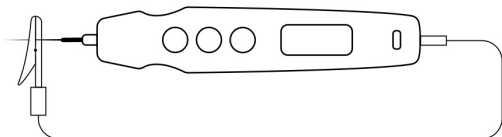
Calibration

To check and adjust the measuring part of the tester (diode), calibration is required. Follow these steps:

1. Connect the cable with the terminal to the tester.
2. Close the probe with the terminal.
3. Turn on the tester and go to the VOLTAGE mode.
4. During calibration, the tester will be producing sound signals while the indicator will be constantly green.

¹ Not included in the complete set.

5. Once calibration is complete, open the circuit and re-boot the tester.



SPECIFICATIONS

Measurement limit	Up to 30 V
Measurement error	0.1 V
Power consumption in the Sleep mode	2 mA
Power consumption in the Off mode	0 mA
Built-in battery capacity	350 mAh
Built-in battery voltage	3.7 V
Dimensions, without probe (LxWxH)	130x26x18 mm
Display	digital
Body material	plastic

COMPLETE SET

TS 100 digital tester	1 item
Cable with the 3.5 mm jack plug and terminal	1 item
Cable microUSB	1 item
User manual	1 item
Package	1 item

WARRANTY CARD

The warranty period is 18 months from the date of manufacture.

Within this period, free technical support and repairs are available.

Warranty obligations do not apply to the following cases:

- Wear and tear of consumables and product parts subject to wear and tear during operation.
- Improper operation or improper maintenance of the product.
- Any damage to the product that occurred during transportation, handling, or storage.
- Traces of repair, disassembly, or other unauthorized interventions in the design of the product.
- Any changes to the product that are not agreed upon with the manufacturer.
- Any elements removed from the product following a malfunction before the arrival of the manufacturer's specialists.
- Exposure to moisture and aggressive environments.

The product is accepted for warranty repairs in its own packaging and complete set.

Lack of packaging material is considered as non-observance of the rules for transporting the product. The warranty does not cover any damage caused to any other equipment operating jointly with this product.

I have checked the product for completeness __, operability __, and absence of mechanical damage __.

I have read and agree with the terms of warranty service:

Buyer _____

Seller _____

Name (model) _____

Date of sale ____ / ____ / ____

Seal



Manufactured by AUTHOR-ALARM d.o.o.

Address: Koroška ulica 26, 1000 Ljubljana, Slovenija. Tel.: +386 30 300 655. Made in Slovenia.

For more details about the manufacturer, product, certificates, and licenses, see the printed appendix.

Visit our website



author-alarm.com

Version as of 9 October 2024

